

## Metallo- $\beta$ -Lactamases Enzymes and Determine Ceftazidime and Imipenem Resistant *Pseudomonas Aeruginosa* Isolated from ICU Equipment

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**Background & Objectives:** *Pseudomonas aeruginosa* is the most resistant bacteria that can cause different disease in humans. One way to create resistance to Carbapenems in *Pseudomonas aeruginosa* is MBLs enzyme produced. The aim of this study was to determine of imipenem, ceftazidime-resistant pseudomonas aeruginosa and the presence of metallo-  $\beta$ -lactamases (MBLs) in resistant isolates.

**Methods:** The antimicrobial resistance patterns of 50 *Pseudomonas aeruginosa* isolated from ICU equipment in Shahid Beheshti Hospital ,Babol were determined from the disk diffusion (Kirby-Bauer) methods and beta lactamase producing by double disc diffusion methods.

**Results:** The most resistant was to cefepime. From a total of 50 isolates *Pseudomonas aeruginosa* 54% were found to be resistant to imipenem and 92% to ceftazidime. 10% of imipenem-resistant strains have beta lactamase enzymes. All isolates MBLs producing were resistant to cefepime, ceftriaxone and ceftazidime.

**Conclusion:** According to our results, resistance to antibiotics in the country, including ceftazidime and Carbapenems is a serious problem, rapid identification of them and use of infections the appropriate infection control measures are necessary to prevent further spread of by these organisms.

**Keywords:** Metallo- $\beta$ -Lactamases; *Pseudomonas Aeruginosa*; Antibiotic Resistance

